

Serial No. 10/765,882

Attorney Docket No. 11-219

LISTING OF CLAIMS:

1. (Previously presented) A sensor device comprising:

an electronic collision sensor for outputting an electric signal in accordance with a physical displacement of a sensing portion of the sensor, the displacement being caused by collision with an object;

a casing in which said electronic collision sensor is mounted; and

a vibration damping member provided between at least part of said electronic collision sensor and said casing for damping a high-frequency vibration in a frequency band equal to or higher than 1kHz such that the high-frequency vibration transmitted to the electronic collision sensor through said casing is suppressed.

2. (Previously presented) The sensor device in accordance with claim 1, wherein said vibration damping member is a potting material, and said electronic collision sensor is surrounded by said potting material.

3. (Previously presented) The sensor device in accordance with claim 1, wherein said vibration damping member is a plate or sheet vibration proofing material or a molded vibration proofing material integrated together with said electronic collision sensor, and said electronic collision sensor is fixed to said casing via said vibration proofing material.

4. (Previously presented) The sensor device in accordance with claim 1, wherein said vibration damping member is a lead member having elasticity which is connected to said electronic collision sensor at least at a portion thereof and is fixed to said casing at least at the other portion thereof, and said lead member and said electronic collision sensor are arranged so

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as to cooperatively constitute a spring-mass system consisting of both a spring of said lead member and a mass of said electronic collision sensor for damping the high-frequency vibration.

5. (Original) The sensor device in accordance with claim 4, wherein said lead member is integrally molded with said casing.

6. (Previously presented) The sensor device in accordance with claim 1, wherein said electronic collision sensor includes a detecting portion, a communicating portion, and an electric power source circuit integrated together as one package, and is directly attached to said casing.

7. (Previously presented) The sensor device in accordance with claim 1, wherein said electronic collision sensor is mounted on a substrate and is fixed to said casing through said substrate.

8. (Previously presented) The sensor device in accordance with claim 1, wherein physical properties of said vibration damping member including a hardness, a dielectric dissipation factor, a shape and a size are configured so as to enhance the properties of said vibration damping member for damping the high-frequency vibration including vibration at a resonance point of said electronic collision sensor.

9. (Previously presented) A ceramic package for an electronic component, comprising:
a main body on which an electronic component is mounted;

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a metallic electrode attached to said main body prior to the mounting of said electronic component on said main body, said electronic component being mounted on said main body so as to be electrically connected with said metallic electrode; and

a lead bonded to said metallic electrode by welding after the mounting of said electronic component on said main body such that said metallic electrode prevents an influence of the welding from being exerted on said electronic component.

10. (Previously presented) The electronic component mounting ceramic package in accordance with claim 9, wherein said metallic electrode is brazed to said main body.

11. (Original) A sensor device comprising;

an electronic sensor for outputting an electric signal in accordance with physical displacement of a sensing portion; and

a casing in which said electronic sensor is mounted,

wherein casing comprises:

a primary molded portion formed by primary molding so as to surround said electronic sensor with a first resin material capable of damping high-frequency vibration, and

a secondary molded portion formed by secondary molding so as to surround said primary molded portion with a second resin material harder than said first resin material.

12. (Original) The sensor device in accordance with claim 11, wherein said first resin material is a liquid-state silicone rubber.

13. (Previously presented) A sensor device, comprising:

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an electronic collision sensor for outputting an electric signal in accordance with a physical displacement of a sensing portion caused by collision with an object; and a casing in which said electronic collision sensor is mounted, wherein said casing is made of a resin material containing a vibration damping material capable of damping a high-frequency vibration in a frequency band equal to or higher than 1kHz to suppress the high-frequency vibration transmitted to the electronic collision sensor through said casing.

14. (Previously presented) The sensor device in accordance with claim 13, wherein said electronic collision sensor is integrally molded with said resin material containing the vibration damping material.

15. (Original) The sensor device in accordance with claim 13, wherein said vibration damping material is a thermoplastic elastomer.

16. (Original) A sensor device comprising:
an electronic sensor for outputting an electric signal in accordance with physical displacement of a sensing portion;
a casing in which said electronic sensor is mounted; and
a dynamic damper attached to said electronic sensor, and said dynamic damper being tuned to a resonance point of said sensing portion.

17. (Original) The sensor device in accordance with claim 16, wherein said dynamic damper is made of a plate or sheet elastic member.

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18. (Previously presented) A sensor device comprising:
an electronic sensor for outputting an electric signal in accordance with physical
displacement of a sensing portion;
a casing in which said electronic sensor is mounted; and
a vibration damping member provided between at least part of said electronic sensor and
said casing for damping a high-frequency vibration,
wherein physical properties of said vibration damping member including a hardness, a
dielectric dissipation factor, a shape and a size are configured so as to enhance the properties of
said vibration damping member for damping the high-frequency vibration including vibration at
a resonance point of said electronic sensor.

19. (Previously presented) The sensor device in accordance with claim 18, wherein
said vibration damping member is a potting material, and said electronic sensor is surrounded by
said potting material.

20. (Previously presented) The sensor device in accordance with claim 18, wherein
said vibration damping member is a plate or sheet vibration proofing material or a molded
vibration proofing material integrated together with said electronic sensor, and said electronic
sensor is fixed to said casing via said vibration proofing material.

21. (Previously presented) The sensor device in accordance with claim 18, wherein
said vibration damping member is a lead member having elasticity which is connected to said
electronic sensor at least at a portion thereof and is fixed to said casing at least at the other

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portion thereof, and said lead member and said electronic sensor are arranged so as to cooperatively constitute a spring-mass system consisting of both spring of said lead member and mass of said electronic sensor for damping the high-frequency vibration.

22. (Previously presented) The sensor device in accordance with claim 21, wherein said lead member is integrally molded with said casing.

23. (Previously presented) The sensor device in accordance with claim 18, wherein said electronic sensor includes a detecting portion, a communicating portion, and an electric power source circuit integrated together as one package, said electronic sensor being directly attached to said casing.

24. (Previously presented) The sensor device in accordance with claim 18, wherein said electronic sensor is mounted on a substrate and is fixed to said casing through said substrate.

25. (Currently amended) A sensor device, comprising:
an electronic sensor for outputting an electric signal in accordance with physical displacement of a sensing portion; and
a casing in which said electronic sensor is mounted,
wherein said casing is made of a resin material containing a vibration damping material capable of damping a high-frequency vibration in a frequency band equal to or higher than 1kHz, and said electronic sensor is integrally molded with said resin material containing the vibration damping material.

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26. (Previously presented) The electronic component mounting ceramic package in accordance with claim 9, wherein said lead is bonded to said metallic electrode by resistance welding such that a first welding electrode and a second welding electrode are, respectively, connected to said metallic electrode, current flow between the welding electrodes through said metallic electrode to generate heat required in the resistance welding, and the welding electrodes are detached from said metallic electrode.

27. (New) The sensor device in accordance with claim 25, wherein the sensing portion has a resonance point belonging to the frequency band.